THE CALIFORNIA MEDICAL JOURNAL.

NOT BOUND TO SWEAR TO THE DOGMAS OF ANY MASTER.

D. MacLEAN, M. D. .... Editor
D. D. CROWLEY, M. D. .... Editor

VOL. 3. OAKLAND, CAL., SEPTEMBER, 1882. No. 9

ORIGINAL COMMUNICATIONS.

ALBUMINURIA.

BY A. W. BIXBY, M. D.

[Read before the Alameda County Eclectic Medical Society.]

THIS is a term applied to a class of diseases which is characterized by the presence of albumen in the urine during some stage of the malady. While albuminuria is a better term than morbus Brightii, which was formerly used to designate the same class of disorders, yet it does not pathologically designate the condition that entails such a sequence. But as the renal glands secrete the urine, and in normal urine there is no albumen, the name indirectly indicates the seat of disease, in part at least, namely, the kidneys.

Urine is rendered albuminous by receiving from the blood, as it passes through the kidneys, a part of its albuminous constituency. This transudation of albumen from the blood vessels into the ureters is almost invariably traceable to one or more of three pathological conditions, namely:

I. *Congestion of the blood-vessels of the renal gland.*

II. *Destruction and loss of the epithelium of the tubuli uriniferi.*

III. *A lardaceous condition of the blood and blood-vessels.*

1. The congestion may be *passive* or *active*. The malpighian bodies are composed of knots of capillaries within convoluted tubes, and either *passive* or *active* congestion produces undue distension and pressure from within them. This condition permits or causes the transudation of serum, containing albumen, into the tubules; and if the pressure and distension are sufficient, blood corpuscles, also, pass into the tubes by migration or rupture. These facts are proven by the symptoms of disease of the kidneys, clinical observation, and experimentation on animals.

2. The loss of the epithelium of the tubuli uriniferi allows the blood to pass into and out of the tubules unchanged. When not diseased these tubes are made up of a very thin membrane, upon one side of which are the capillary blood-vessels; and on the other and inner side are arranged the epithelial cells. Upon these cells depends the function of the gland. The fluid of the blood, during normal condition, passes readily from the capillaries through this immeasurably thin membrane, and comes in contact with the secreting cells. The cells, acting instinctively upon the serum thus presented, perform their function by selecting such elements, and only such, as should enter into the urinary secretion. The pure blood being thus relieved of its cargo of waste materials, instinctively passes back into the circulation; but when the epithelium has been removed, the liquor sanguinis, having traversed this delicate membrane, can easily pass along and out of the tubes without modification.

3. During the progress of lardaceous disease of the kidney, the essential elements of the blood and the textures of the walls of the blood-vessels are so changed that the serum, containing albumen, transudes from the capillary vessels in all parts of the body. The malpighian vessels are among the first to be thus affected; and being situated as they are, any exudation readily passes into the tubuli and incorporates with the urinary secretion.

Attention has now been briefly called to the pathological conditions, causing albumen to appear in the urine; a brief exposition of the relation of said pathological conditions and the albuminous phenomenon has also been presented; and the proximate causes of albumen in the urine may be thus recapitulated: *Congestion of kidney*, passive or active; *loss of epithelial cells* of the tubuli uriniferi; and *lardaceous disease*.

By considering the above facts and points, we can clearly perceive that albumen in the urine may temporarily exist without organic change in the structure of the kidney; and also that whenever albumen becomes a permanent element of the urine voided, there probably exists a disease that may be classed as albuminuria, in accordance with the common acceptation of the term.

In this paper, albuminuria, its causes, primary and proximate, with symptoms, diagnosis, progress, duration, morbid anatomy, and treatment, will be presented under three distinct heads, namely:

1. Tubular nephritis.
2. Granular degeneration of the kidney.
3. Lardaceous disease of the kidney.

Thus, three names are given to designate three distinct pathological conditions, each of which is accompanied, at some stage of its course, with albumen in the urine.

In the *first*, the tubal structure is primarily affected; and the disease may be acute or chronic.

In the *second*, the fibrous, or areolar, tissue of the kidney is primarily affected; and the disease is essentially chronic in its manifestations.

In the *third*, the disease is essentially constitutional and general, the vascular structure of the kidney being primarily affected as a consequence of the constitutional vice, the malady being necessarily chronic in its nature.

Either of these diseases may exist solitarily throughout its entire course, the disease not extending to other tissues of the kidney than the one primarily affected; or, during its course, it may become complicated by the development of one or both of the other disorders named.

With this differential analysis and classification of albuminuria, fixed in mind as a guide for the arrangement of albuminuric phenomena, I will now proceed to the consideration of tubular nephritis.

TUBULAR NEPHRITIS.

Synonyms—Inflammatory Dropsy; Desquamative Nephritis; Tubal Nephritis; Catarrhal Nephritis; Diffuse Nephritis; Bright's Acute Disease.

PATHOLOGY.—This disease is essentially an inflammation of the tubuli uriniferi, with great augmentation and exfoliation of epithelial growth. There is at first inflammatory determination and congestion which ruptures the capillaries, especially of the malpighian knots. Then follows the increased proliferation of epithelial cells, which plug up the tubules; this interferes with, or arrests, functional action; hence, the normal renal secretion is retained in the blood and acts as an irritant poison.

ETIOLOGY.—The predisposing causes may be reverted to under the following heads: Climate, Age, Sex, Pregnancy.

Climate: Tubular nephritis is practically unknown, except in the temperate zone. Residents of the torrid and frigid zones are exempt from this disease, except as the result of traumatism or drugs. Hence, residence in a temperate climate is considered a predisposing cause.

Age: It is essentially a disease of childhood from the age of two to ten. When occurring in adults it is met with most frequently between the ages of twenty and thirty; seldom after forty; and scarcely known to occur after fifty.

Sex: It occurs much more frequently in males than females.

Pregnancy: As this disease occurs more frequently in women who are pregnant than any other class, pregnancy is considered a predisposing cause.

The proximate, or exciting, causes may be enumerated as follows:—

1. Whatever arrests the function of other secreting and

excreting organs, thereby retaining materials in the blood that become renal irritants, namely: *Exposure to cold*, checking perspiration; *functional* or *organic* disease of the liver, causing retention of bile in blood, etc., etc.

2. Such diseases as develop renal irritants, namely: Rubeola, scarlatina, erysipelas, typhus fever, diphtheria, pneumonia, acute rheumatism, etc.

3. Irritating diuretics, namely: Turpentine, alcohol, cantharides, copabia, arsenic, etc.

Symptoms: Tubular nephritis is usually ushered in by a well marked chill or rigor, which is soon succeeded by a high grade of fever; the skin becomes dry, hot, and harsh; pulse rapid, hard; tongue dry and coated white; bowels constipated; often nausea and emesis; urine scanty, high colored, often tinged with blood; micturition, frequent, difficult, painful; severe, deep-seated, constrictive pain in loins; headache; extreme restlessness and nervous irritation.

During this pyrexia, œdema of the eyelids, and then general anasarca usually makes its appearance, though sometimes it precedes the fever, in part; there is but little if any pitting on pressure.

These phenomena are manifested during the first two or three days; after which, in favorable cases, defervescence gradually ensues; the urine is augmented to more than normal quantity; and convalescence is established in 10 to 12 days. In other and unfavorable cases, the above pyrexial symptoms become greatly intensified; coma supervenes; uremic convulsions set in; and the angel of grim death scores a victory during the first six days.

THE URINE IN TUBULAR NEPHRITIS.

Chemically the urine is markedly changed. During the invading and pyrexial stages all of the normal elements of the urine are notably diminished; the specific gravity is raised, frequently to 1030°; the water, the urea, and the chlorides are diminished more than in any other rena disease; the sulphuric, uric, and phosphoric acids are considerably lessened. During convalescence, however, all of these elements are increased above the normal limit; and the specific gravity is lowered below the normal standard, frequently to 1010°.

Besides the above changes, the urine contains blood corpuscles, mucus, free epithelium, epithelial casts of the tubes, and albumen in larger quantity than in any other disease, sometimes as much as 480 grains in 24 hours.

Diagnosis: This is easily made from the high grade of fever; restlessness; nervous irritation; the deep-seated, constrictive pain in lumbar region; the scanty high colored urine; difficult, painful, frequent micturition; and albumen, casts, etc., in the urine.

Prognosis: If but one kidney is affected, and patient properly treated from beginning, recovery will ensue; but if both glands are affected severely, he will probably die; or, if one affected and neglected, it may prove fatal.

Duration: Tubular nephritis may be acute or chronic. It usually begins with the acute form as pointed out above, and terminates in from 8 to 12 days; yet there are exceptions. This acute form occasionally passes into the sub-acute form, and continues from four to six months; then resulting in recovery, or death sometimes. Occasionally, also, it will manifest itself in the sub-acute form from its inception, making its inroads upon the system insiduously; its symptoms so mild, its encroachments so gradual, that the patient is slow to realize his danger. This form is liable to become complicated with Interstitial Nephritis. While the usual limit for the acute to run its course is fifteen days, and the chronic, or sub-acute, six months, yet the disease manifesting itself in either form may continue for years before its culmination.

Treatment: The rational indications point to treatment for the accomplishment of the following results:—

To retard the circulation and lessen the temperature; to overcome irritation and congestion of the renal gland; to cautiously promote the activity of other secreting and excreting organs; to promote the elimination of urea and antagonize uremic poisoning, and to sustain the vital force.

To reduce the circulation and normalize the temperature, Veratrum Viride and Aconitum Napellus are the special remedies, and to be selected in accordance with the existing pathologic indications. If the pulse is *full* and *bounding*, Spec. Tinct. Ver. Vir. in ¼ to 1 drop doses, every one or two hours, is the preferable remedy; if the pulse is *small* and *wiry*, Spec. Tinct. Acon. Nep. Rad., in ¼ to ½ drop doses, should be administered every 1 to 2 hours; but if there is no marked departure from normality, except in rapidity, Ver. Vir. and Acon. Nap., combined, will give the most satisfactory result.

To overcome irritation and *active congestion* of the renal gland, Spec. Tinct. Gelseminum Sempervirens, in 3 to 6 drop doses every hour, is the remedy. This condition is denoted by the *vibratile* pulse, associated with bright flush of cheeks, and bright eye with contracted pupil.

To overcome *passive* congestion, Belladonna is, probably, the best remedy known. The Spec. Tinct. in ¼ to ½ drop doses, every hour, should be given. This condition is portrayed by the *oppressed* pulse, associated with pallid, expressionless face (or, if flushed of dark color), dull eye with dilated pupil, and a stupid drowsy condition, verging on coma.

The pathologic conditions, calling for Ver. Vir. and Gel. Semp., are quite often associated; while those demanding Acon. and Bell. frequently occur simultaneously.

To allay the irritation of the epithelial membrane of the tubuli uriniferi and the ureters, Spec. Tinct. Tricticum Repens, in 6 to 10 gtt. doses every 2 hours, is a most excellent remedy; also, Spec. Tinct. Alisma Plantago, in ½ to 1 gtt. doses every 1 or 2 hours, will be found serviceable for the same purpose. These remedies have an elective affinity for the mucous membrane throughout the urinary apparatus, and relieve or favorably influence irritation and inflammation thereof.

The bowels should be kept solubly active by the use of a saline laxative; but no active purgation should be produced.

Tinct. Asclepias Tuberosa may be added to the arterial sedative to promote the function of perspiration.

As the pyrexia begins to decline, or even before, Tinct. Apocynum Canna. should be associated with the sedative, in 3 to 5 drop doses, to remove the dropsical effusion.

Acetate and Chlorate of Pot., as eliminators of urea, and Carbon. of Ammo., as an antidote to uremic poisoning, can be relied upon to subserve such ends.

The warm sponge bath; the hot sitz bath and pediluvium; the hot pack or sinapism to the loins, are means that should be thought of and judiciously employed in severe cases.

The patient should be kept quiet, sustained by a nutritious, non-stimulating, fluid food, and caused to drink considerable water or linum tea. Animal diet, alcoholic stimulants, and stimulant diuretics, are to be proscribed.

As the inflammatory symptoms pass away, Alstonia or Cin-cho Quinine, and the bitter tonics may be required. Sometimes iron as a restorative may be serviceable; but it must be used cautiously, for, if given too soon, it may cause a relapse.

Besides the pathologic phenomena already enumerated, others may arise in the course of the malady, calling for medicinal agents not mentioned in the above. Quite frequently there will be indications pointing to Bryonia, Rhus Tox, Apis., Cimicifuga Rac., Baptisia, Nit. Acid, Hyd. Acid, Sulphite Soda, etc., or other remedies. If so, of course, whatever remedy is indicated should be administered.

In treating this, as well as all other diseases, we must be guided by specific indications that portray pathological conditions, and be governed in our treatment thereby.

(*To be Continued.*)

RETINITIS ALBUMINURIA.

[Extract from a paper read before the Alameda County Medical Society.]

BY F. CORNWALL, M. D., SAN FRANCISCO, CAL.

It is a known fact that there is a form of retinal inflammation which occurs as a result of, or coincident with, albuminuria, or Bright's disease of the kidneys. Just the pathological connection there exists between the retinal affection and that of the kidney has not been demonstrated, and the conjectures in regard to it are greatly at variance, and none of them particularly plausible. It has been supposed by some that the inflammation and degeneration of the retina are due to an impairment of the nutrition of the latter, dependent upon the great amount of urea in the blood. By other observers it has been thought that the secondary increase in the tension of the aortic system forms the starting-point in the disease. The latter opinion seems the more plausible, as hypertrophy and dilatation of the left ventricle is so common in this affection.

It is not my purpose in this paper to attempt the description of the pathology or the ophthalmoscopic appearances of the retinal affection to any extent, but to call the physician's attention to it as one of the symptoms of *morbus Brightii*, which, by reason of its almost certain demonstration, is of great importance in diagnosis.

As I understand it, the fact that albumen is found in the urine is evidence that the disease shall be pronounced Bright's albuminuria, but when the coincident changes take place in the retina, we would have sufficient reason to believe the affection to be genuine. In cases of acute albuminuria that occur as a result of scarlatina, diphtheria, etc., the ocular symptoms would lead the intelligent physician to suspect the disease of the kidney, which otherwise might not have attracted his attention until a much later date. In cases of this kind the physician should also be able to comfort the parents by informing them that, with judicious treatment, the blindness can probably be cured.

In cases of albuminuria of pregnancy, anasarca sets in, and it is possible that the physician would overlook the retinal trouble; but if blindness should be one of the symptoms, it would lead him to think of the retinal disease, and thereby an examination of the urine. If an oculist be at hand, he should be summoned in such a case, as by determining the cause of the blindness, the diagnosis of the albuminuria would be confirmed or reversed; and besides he (the oculist) would be able to advise proper treatment for the retinal inflammation.

Too much importance cannot be placed upon an early correct diagnosis of these grave forms of disease, as by timely aid they may be materially controlled. Not many months since I examined a case which forcibly illustrates this fact. A middle-aged lady gave me the following history, which caused me to anticipate the character of her eye disease before I made an ophthalmoscopic examination. Some six months since, while in the fifth or sixth month of pregnancy, she became dropsical, which increased up to the time of her delivery. She also became gradually blind. During the last few weeks previous to her confinement, her life was despaired of by her physicians, but, contrary to their expectations, as soon as delivery took place, she rallied. She was, if I recollect correctly, almost totally blind at this time, but, as her health improved, she recovered her vision, so that at the time of my examination she could count fingers a few inches. The physicians, who, so far as I know, were quite well informed, did not suspect the cause of the ocular affection or the dropsy.

It is sufficient to say, that, upon examination, the retina showed that the disease had been albuminuria, and the cause being removed, the disease of the eye ceased in its activity, but left the results of an inflammation which could but partially be removed.

There are certain peculiar appearances of the retina when viewed by the ophthalmoscope in this disease, that it may almost with certainty be said that it is from Bright's disease, or not. There is in the first stage many of the symptoms common to other forms of retinitis, of which it is not necessary to speak; but as the disease progresses, we notice the formation of small white spots in the retina. They are likely to arrange themselves in groups around the optic disk, and increase in size, until the whole surface assumes a white tendinous appearance. In the region of the yellow spot, we notice a very peculiar appearance, and this is thought to be pathognomonic of the disease. There is an arrangement of bright whitish yellow spots around the macula, which has been described as stellate. They could scarcely resemble the stars, except it be in their brightness. Using the macula as a nucleus, they radiate, in many cases, in a stellate manner, and from this fact I suppose they have been spoken of in this way. This ophthalmoscopic appearance of the retina is produced by sclerosis and fatty degeneration of the connective tissue and cellular elements of the retina.

PATHOLOGY OF ALBUMINURIA.

BY J. P. WEBB, M. D.

MANY names have been proposed by various pathologists for the disease called after Dr. Bright. Up to this time none of them have been sufficiently good to comprehend all the lesions which occasion renal dropsy, with persistent albuminuria.

The pathologists differ as widely as the names, and I, having so little experience, can only tell you in my way what I have found out by research.

Some claim "that in the peculiar constitution attending Bright's disease, the vessels throw out the yellowish matter characteristic of that complaint instead of serum, coagulable lymph and pus." Of others that Bright's disease is a *grade* of irritation of the renal substance, not amounting to an inflammation; but sufficient to derange and partially suspend the proper function of the kidneys, and produce a gradual alteration of their structure, and that the albuminous matter found in urine is a mere effusion caused by irritation, washed off from the mucous surface and brought away by the urine, but forming no part of that fluid as secreted.

It is quite evident that it is not an inflammation, acute or chronic, as inflammation wastes the substance of the kidney by suppuration or ulceration, or indurates it by the ordinary process of adhesion; but in Bright's disease the renal substance is absorbed to make room for a yellowish granular deposit, which may afterward be itself absorbed, leaving the organ almost obliterated.

Dr. Johnson regarded the affection as an acute inflammation of the membrane lining the convoluted tubes; and as a prominent feature is the desquamation of the renal epithelium, he suggested, as an appropriate name, acute desquamative nephritis.

In this affection, as in the chronic affection, which involve structural changes, he regarded the secreting cells of the kidneys as the primary seat of the local morbid manifestations, depending on " an effort made by the cells to eliminate from the blood some abnormal product." According to this pathological view, morbid blood changes underlie the local affection.

The obstruction of the tubes and the loss of secreting cells lead to the transudation of blood serum, causing the albuminuria, and to the deficient elimination of urea, causing in some cases, uremic poisoning.

Exudation of fibrin takes place into more or less of these tubes; hence, the hyoline, or waxy casts. The diminished density of the blood serum from the loss of albumen, together with the embarrassment of the capillary circulation from the retention of urinary principles occasions the dropsy. On examination of the blood in acute albuminuria, it shows a lessened proportion of albumen, a low specific gravity, paucity of red blood corpuscles, and an augmented amount of urea.

The bronchitis and serous inflammations which are apt to occur as complications are supposed to be due to the action of urea accumulating in the blood; vomiting and purging are attributable to an effort on the part of the gastro-intestinal mucous membrane to eliminate the urea vicariously.

Both kidneys being alike affected, the affection is bilateral, a fact that goes far to sustain the doctrine of dependence on a morbid condition of the blood, Dr. Mann says *system*.

As exemplifying the pathological law of parallelism, and in other respects, the affection is analogous to bronchitis, and, although involving an obvious solecism, the name, *Renal Bronchitis*, has been applied to it, and the epithelial and other casts contained in the sediment of the urine may be compared to the matter of expectoration in bronchitis.

MOUNTAIN FEVER AND PNEUMONIA.

BY A COUNTRY PRACTITIONER.

THERE is a dearth of literature upon the subject of Mountain Fever and Pneumonia (I speak of these affections as one, because of their intimate relation), and the average medical man knows but little of the cause or pathology of diseases peculiar to great altitudes. It is not common for medical teachers in colleges to discourse upon these affections, and, as a consequence, the physicians who are educated at these institutions are obliged, if they undertake to practice in the mountain districts, to rely upon their own resources, together with what they may be able to glean from their brother practitioners.

I was not aware, until I visited these localities, of the great difference in the symptoms and treatment of the affections of altitudes compared with those which bear similar names in the Eastern States. The symptoms vary, mainly in degree, being much more severe in the mountain affections. It seemed to me somewhat a mystery that men should be sick at all where the atmosphere was so pure, and where vegetable or animal decay was certainly very limited; with the purest of water, and the great pine forest giving off its healthy terebinthinate odors, yet sickness there was, and of the severest type. I, afterwards, by my observation, aided by others who had practiced medicine a great many years in these localities, was enabled to satisfy myself, to an extent, in regard to the cause and pathology of these affections. To Father Avalli, (the spelling of his name is probably incorrect) a French missionary among the Flathead and other Indians in Montana Territory, I owe no small amount. This venerable man, who was a scientific medical man as well as a devoted Priest, had been forty years unselfishly devoting himself to the alleviation of human misery, both among the whites and Indians of this, then, wild country. The conclusions I came to were as follows:

That, at great altitudes, animals of most kinds which are not natural to them, have a less resistance than in their normal sphere; and, that some of these animals are unable to live at all, dying from the slightest exposure or hardship. This is evidenced from the fact that at Leadville, dogs and cats are not viable, and that a very great per cent. of horses which are shipped to this place by railway, die from slight causes. Man alone, of all these imported animals, has the greatest endurance; but he too suffers when badly protected or much exposed to the elements.

The inhabitants of inland countries of slight altitudes, which have not the purifying influence of an ocean atmosphere, suffer from a variety of maladies which are more or less destructive to life; but usually it takes prolonged and severe attacks or sieges of disease to produce this fatality, and so the death rate is often less than in the mountain countries where cases of illness are comparatively rare. In the marshy districts of Indiana, or Southern Illinois, the inhabitants expect as a common affair of life that they will suffer several months of each year from some form of malarial fever, yet they live to a good old age in most cases. On the other hand, in these great altitudes, cases of sickness are quite rare, but the mortality may be, to the *per capita* of the population, much greater than in the lowlands. Men, in the mountains; may be in seeming good health, when, from some comparatively slight attack of disease, they will succumb.

From all this, I concluded that the same influence of the altitude which makes it impossible for certain lower animals to live, that man is similarly influenced, and that slight causes will produce death. It always seemed to me that the thread of life was more brittle—as it were—and that, with a given extent, of inflammatory action in an organ, or poisonous material in the blood, the individual is more likely to succumb than in the lower altitudes.

The mode of life of men in these mountain countries has much to do with the causation, mortality and treatment of its maladies. The men who "batch it"—and the greater part live in this way—get along with as little cooking as possible, and the aliment which is most easily transported in packs to their camps, and is most readily prepared is the make-up of their dietary. Very strong coffee, old strong bacon, beans, and baking powder cakes (slapjacks) is the daily round that these men gulp into their stomachs; and that they should get *bilious* is no wonder. There is no other animal that could subsist on such diet but man, and I am very confident that a Rocky Mountain lion would give up all his ferocity and cunning and pass away peacefully to an untimely grave, in a six month upon this regimen. Our prospector, bullwhacker, mule-skinner, or what not, adds to this, the vilest of whisky that the ingenuity of depraved man ever concocted; he sleeps with his clothes on until they wear out or off, and in a bed of old gray-backy, bed-buggy blankets that would delight the aboriginee. His secretions are checked and prevented by the rancid pork, heavy bread and strong coffee; his blood becomes poisoned from these retained secretions and impoverished from the bad supply of nutrient material, and he is taken with a fever. Which is it from, vegetable or animal malaria? Neither. He is poisoned by his own retained secretions. This is the way most of the typical cases of mountain fever occur.

As another cause of disease at altitudes may be mentioned the great disparity of temperature between night and day, and, also, the extreme vacillation at all times. In a cañon, particularly on the north side, while the sun is at, or near its meridian, the heat is intense—say 95°—in the shade, and proportionately much greater in the sun; and by midnight ice will be frozen half an inch in thickness. This state of affairs is present in all mountains where the altitude is great, but it is more marked in the mountains of Montana and Idaho than in those of southern countries. The man who makes a trip up a mountain at 2 P. M., almost roasts with heat, though thinly clad, but when he returns at 5 P. M., he would suffer from cold with a winter overcoat on. These daily vicissitudes of heat and cold make a heavy strain on the most vigorous constitution, and to the delicate or unacclimated person it is very likely to result in mountain fever or pneumonia.

Besides these diurnal changes, the temperature frequently falls, or rises 40° or 50° within a few moments. This is produced by a change of wind from some dessicated valley to a snow-clad mountain. This friskiness of the temperature is stimulating to the vigorous, but to the delicate or young it often proves a source of inflammatory attacks.

(*To be Continued.*)

VACCINIA FROM MILK.

MESSRS. EDITORS:—In the July issue of your journal you referred, under the above caption, to Dr. Harris' case reported in the July *New England Medical Gazette,* and concluded with the statement, "Dr. Harris considers the case one of Vaccinia produced through the milk. *The crucial test of inoculating from the vesicles was not made.* [The italics are my own.] It is therefore somewhat probable that it was an eruption produced by milk given by a mother suffering from fever, especially as the child is said to have been eczematous."

Through the courtesy of Dr. Harris, I saw the case three times during the eruptive stage; and, as the case is probably unique, and the crucial test of inoculation from the vesicle was applied, I venture to forward to you some facts about it, which you can use as shall best please you.

Dr. J. D. McCollam, City Physician of Boston, in the Tenth Annual Report of the Board of Health of the City of Boston, 1882, says of the case: "A healthy woman, the mother of two children, was vaccinated February 13th, with bovine virus, by her family physician, Dr. J. T. Harris, of the Roxbury District. On the fifth day after her vaccination the patient complained of headache, had considerable fever, and, in fact, had the usual amount of discomfort that attends a successful vaccination. The woman was at this time nursing her infant about six months old. The child had not been vaccinated on account of an attack of eczema. On March 1st, an eruption appeared on the head, thorax, and legs of the child, who had been feverish and irritable for two or three days previous. On some portions of the body the eruption was confluent, but on the arms and thighs it presented the characteristic appearance of cow-pox. It was not an accidental instance of inoculating, for there was no possible way in which the child could have introduced the virus at so many different points. The only explanation possible is that the disease must have been contracted from the mother through the medium of her milk."

This case was seen repeatedly by Dr. Henry A. Martin, of Boston, than whom it is recognized that no living man has a more exhaustive and critical knowledge of the whole subject of vaccinia, and a few brief quotations from an elaborate and learned article on this case in *The Medical Record*, New York, of April 15, 1882, p. 393, will give his opinion of it.

He says: "The case was a most perfect and undoubted one of general vaccinal eruption." Again, "I find no case in the literature of vaccination which I have toiled through in this special research, in which a re-vaccinated nursing mother communicated undoubted vaccinia to her nursling through the medium of lactation, and such, without doubt, was the case I now put on record. * * * On examining the entire surface of the body, at least four hundred clearly defined, perfectly circular, invariably umbilicated vescicles were apparent."

As regards the crucial test he says: "With the points charged at my second visit (tenth day), I inoculated on the outer margin of the left *labium pudendi*, a very fine yearling Jersey heifer calf, which I devoted *exclusively* to the experiment. I inserted the virus in six places. * * * On the third day it was evident that all the insertions had "taken." On the seventh day there were seven fine typical vescicles at places of insertion, and two so-called spontaneous vesicles."

He then says: "These were so evidently vaccine vesicles that I did not hesitate to charge a few points from them, and with these made three primary and one adult secondary vaccination. They were all successful."

The above makes it, certainly, beyond reasonable doubt, that the eruption was that of vaccinia, and was communicated through the contaminated milk of a re-vaccinated mother, and is a new phenomenon in the history of the disease.

C. E. MILES, M. D.

Boston Highlands, Mass. Aug, 18, 1882,

ANCHYLOSES.

BY D. D. CROWLEY, M. D.

WHETHER it is practical or not to endeavor to produce mobility in an anchylosed joint, at all times, is a matter well worthy of consideration. We often see an immovable joint while the patient suffers intense pain in its structures; at this period there is inflammation; the muscles and surrounding tissues are rigid; but the joint is not anchylosed. The immobility is only the result of rigid muscles. True anchylosis is a subsequent result of inflammation.

We frequently see reports of stiffened and useless joints returning to their former activity. Undoubtedly many of them were only muscular atrophy as cicatrices of the surrounding connective tissues, and upon slight surgical interference they regain motion. In different works this condition is classed as one of the forms of anchylosis. We can only consider true anchylosis as a condition of the joint or of those structures in intimate relation with it.

In inflammation of a joint there is more or less destruction, which is followed by repair. In the process of repair granulations develop upon each articular surface. At this period there is hyperæmia and tenderness; the attending physician, fearing the return of inflammation, defers moving the joint; the granulations unite, and there results an immovable joint. Upon the subsidence of inflammation of a joint, the secretions of the synovial membrane are arrested.

In the enarthrodial joint—for example, the shoulder—the capsular ligament allows the articular ends of the bones to separate at least an inch, admitting great freedom of the humerus. If there is suppuration of any of its parts with a fistular opening, there will be subsequent shrinkage and therefore a stiff joint. Even if there be no suppuration as a result of inflammation, the infiltration of a tissue is followed by atrophy, shortening of the ligament, and loss of motion. This of itself might be sufficient to cause a loss of motion for months, but its subsequent changes do not stop here. The connective tissue that generally forms bands of union in a joint, take in ossified matter which forms bony bands that render a joint motionless. It is said that we can have true bony union of a joint; that the articular ends of bone may reunite like fractured ends, and this is reasonable, for what difference can there be between a joint whose bones are divested of their cartilage by inflammation, when there is an exudation of ossified matter, forming a bony union, and the fractured ends of a bone passing through the same process.

The former often becomes as firm and immovable as the latter. It requires but little time to ascertain the extent of anchylosis, as to whether it is bony or ligamentous. When it is bony, no pain can be produced within the joint by attempts at motion, either voluntary or involuntary. But if fibrous, in both instances there is marked pain. In the bony anchylosis, there is no motion in the joint. In the fibrous, the joint is not fixed.

Anæsthetics have a marked influence in affecting a diagnosis. For, in the bony union no motion can be produced even while the patient is deeply anæsthetised. In the fibrous form there is considerable. In operative procedures great care must be used in order that more harm than good do not result. Of late years it is unfrequent that operative measures are resorted to in anchylosed joints, for in nearly every instance during the inflammation, or in its subsidence, the limb is placed in a position where it may become a useful member afterwards. The knee should be nearly straight, the elbow flexed, the fore-arm between pronation and supination, etc. If such precautions be taken it is often useless to endeavor to effect motion.

But considering that instead of the leg being perpendicular with the body, it is flexed upon the thigh. In this position it is useless. It is even detrimental, for without it, a wooden limb might be used. To remedy this abnormal position various modes of operating have been resorted to. The one that is the most feasible is to chloroform the patient, turning him over on his face, the knee resting upon the edge of the table; an assistant caring for the breathing of the patient, while another holds the thigh firmly. The operator now grasping the calf of the leg endeavors to produce slight extension, and if it is ligamentous, the bands of union should be torn by force, the limb firmly extended and held in place by plaster of paris bandages; previous to the hardening of the plaster of paris, wooden splints well padded should be bound to the limb over the popliteal space, extending from the middle one-third of the tibia to the same distance on the femur.

Everything is now favorable for acute arthritis. To prevent this, dry cold should be applied—ice in a rubber bag. By this means determination of blood is arrested and also the acute inflammation that might supervene. The patient should remain in bed for the first ten or twelve days. At the termination of four weeks all dressings are removed, and the patient though having an anchylosed limb, now has a useful one. Frequently the operator meets osseous anchylosis, and then all the force he can bring to bear is not sufficient to break up the adhesion. It is even easier to fracture either the tibia or femur away from the articulation than in the joint, and, if this is effected, the limb is placed nearly perpendicular with the body, and the solution of the joint treated as a fracture. Good results are often produced by this mode of treatment. Yet it is a dangerous procedure. When there is deformity with osseous anchylosis, it is now practical to resect one or both of the bones included in the joint.

ZYMOSIS.

BY A. J. HOWE, M. D.

When the tissues of the living body are morbidly impressed by the putrefactive poisons of decomposing animal substances, the attendant febrile state is said to be *zymotic*; and a correlative condition produced by the inception of gases arising from fermenting vegetable material is regarded as *miasmatic*. By thus contrasting two well-known morbid influences, the former may be the easier comprehended and the better understood.

Toxœmia is a technical term once employed to express blood poisoning, no reference being made to the kind of virus which developed morbid phenomena. *Sepsis* is also a word which denotes a pathological state incited by the absorption of a poison elaborated within the living body, as in a case of purulent infection, typhoid fever, or traumatic inflammation. *Septicœmia* is a familiar expression which means blood poisoning, but the term, through custom, has become restricted to toxic states manifested in peritoneal inflammations.

Inasmuch as nothing valuable is gained by multiplying abstruse terms to express similar things, I shall consider ZYMOSIS as a suitable word to designate morbid states provoked by the presence of an animal poison in the living organism. It may be interesting and instructive to discuss the difference between self-empoisonment and that which comes from without, as when a physician in executing an autopsy receives virus from an accidental cut or abrasion, a ferment from decomposing animal matter enters the circulation and excites a zymotic state.

Before entering more deeply into the subject, it may facilitate progress to introduce the signs, features, or phenomena of zymosis, as well as to point out, in the way of illustration, the phases and characteristics of the disease. The general symptoms of the disorder may be recounted as follows: If the poison arise from without, through a wound of the cuticle, the ferment enters the venules, and by its powers of reproduction, soon is abundant enough to contaminate the entire fluids and solids of the body. Some of the poison enters the absorbent vessels, and so profoundly impresses the lymphatic glands that they inflame, and sometimes suppurate, producing buboes or adenoid abscesses. Before pus is developed the patient experiences a severe chill, or a series of chills, and subsequent febrile paroxysms, the pulse quickening to 120 beats to the minute, and the temperature rising to 103 degrees. The skin becomes hot and dry, and takes on a dusky hue. Thirst and restlessness attend, and delirium is rarely absent during the whole course of the disease. The stomach fails to digest, and the tongue becomes coated or encrusted, and the breath offensive as if putrefaction were taking place in the throat and respiratory passages. The kidneys excrete a restricted quantity of high-colored and strong smelling urine, and the bowels are apt to be loose and the fæces fetid. Such, in brief, are the earlier manifestations of common blood poisoning, the toxic agent coming from without, and entering by inoculation.

When the toxæmia arises from the absorption of poisonous fluid developed in the textures or cavities of the living body, a state which is observable in typhoid fever, diphtheria, erysipelas, and surgical wounds, the manifestations are not widely different from those excited by the introduction of a poison from without. However, in the latter state of sepsis, the virus is apt to be received into an extremity—in a finger, for instance, the lymphatics of the axilla then being liable to inflame and suppurate. In a case of self-empoisonment, as in typhoidal states, Peyer's glands inflame and ulcerate, and mental obliquity is a prominent symptom. The blood becomes rapidly bereft of red globules, the flesh wastes, and the patient dies through vital insufficiency. In diphtheria, the cervical glands become poisoned through the absorption of virus from sloughs in the tonsils; and an exudation upon the respiratory epithelium quickly brings about asphyxia, aeration being very imperfect. After traumatism of the peritoneum, septic fluids gather and ferment, furnishing quantities of deadly poison. Every practical surgeon has encountered many cases of the kind; and the obstetrician has familiarized himself with puerperal peritonitis—a name for child-bed fever, or the zymosis of parturients.

In considering this topic, or series of topics, we cannot fix our mental eye on any definite something which can be declared to be the "sepsin," or composite entity, which does the mischief; but manifestations only are to be observed and passed upon. We may array in the miscroscopic field a host of bacteria, bacilli, and other 'zymes almost too numerous to mention, yet not be sure that any one of them constitutes or embraces the septic principle. A thrombus in a uterine sinus evolves a putrefactive ferment that, like leaven, poisons the entire organism, even to the killing of the victim, without definitely disorganizing any particular tissue. The virus seems to possess the power to *devitalize*; it is potent to establish destructive metamorphoses that are appreciable, and not merely speculative or transcendental. The physician in charge of such a case, unless he have uncommon confidence in his remedial methods, feels that his patient is possessed of an evil spirit—a virulence which is so destructive in its tendencies, so devitalizing in its operations, that the most trusty of remedial agents prove impotent to save. In mild, or even in average cases, the conservative forces of the body, aided by vital stimulants, bring about a successful issue; but in the worst forms of sepsis or zymosis, destructive metamorphoses go on in spite of the best planned schemes to stay them; they devolop functional disorders of all kinds, and prove fatal in one way or another, the exact lethal processes not being foreseen.

After parturition, amputation, or abdominal section; about three days elapse before symptoms of sepsis appear, hence a certain length of time is necessary for the putrefactive ferment to be developed. Sepsin in limited quantities may be present on the second day, yet enough poison to make an intense impression upon the organism is not elaborated till the beginning of the third day, and occasionally not till the fourth or fifth days. In the majority of instances, the eliminators of poisonous or waste materials are able to cast off that which is deleterious, so that no toxæmic phenomena continue; and in marked cases of zymosis the excretory organs—the skin, lungs, liver, kidneys—remove so much of the debris or waste matter, together with the virulent principle, that recovery is possible, if not probable. In an occasional instance during the progress of zymotic fever, a day or two will pass during which depuration just keeps even with production—construction of bioplasm just keeping parallel with disintegration—so that the issue cannot at once be determined. During the doubtful contest, discreet efforts on the part of the physician may win a victory that unaided nature would have lost. In endogenetic toxæmia it is highly important that the patient be kept alive long enough for the excretory and depurating organs to throw off refuse matter and septic material. The nutritive forces are to be coaxed into activity, and the best of supplies are to be furnished. Undigested material adds fuel to the flames, hence injudicious feeding proves detrimental.

It is not my purpose on this occasion to speak of specific poisons which produce zymosis, except in a general way. In scarlatina, variola, and syphilis, the blood is poisoned, yet the phenomena vary somewhat from those manifested in ordinary zymosis. The most dangerous phases of scarlet fever are; first, in the profound shock and excessive heat; and, secondly, in the suppurative exhaustion and pyæmia. The mucous linings of the respiratory passages become abraded or detached to an extent which allows septic stuff to enter the deeper structures, and become absorbed by the venules and lymphatics. The poison of scarlatina first comes from without, but during the development of the disease it becomes autoseptic, or self-poisoning. Diphtheria is of a similar nature, the tonsilar slough being exoseptic, but the consecutive impression is endoseptic.

The sepsis of variola is rarely dangerous, except the eruption becomes confluent. So much poison is then absorbed that the waste-gates of the body can not let the debris out fast enough. In vaccina there is genuine toxæmia, yet the quantity of poison is not great enough to overwhelm the vital processes.

The sepsis of syphilis is peculiar, the toxic fever not showing itself for months after the initial lesion is produced. Primarily the sore is exoseptic, but later developed poisons are autoseptic, or generated within the body.

It will be seen by what has been said, that specific animal poisons do not evolve ordinary zymosis, but a peculiar virulence that is propagated by infection or contagion. The breath of a person coming down with scarlet fever, rubeola, or variola, loads the air with germs that take root in the bodies of the impressible; and the diseases named are restricted to one run of contagion, or to a single impression. Diphtheria and erysipelas may be taken repeatedly; and puerperal sepsis may manifest itself at every fresh delivery.

Specific sepsis exhibits itself after a given period of latency—from seven to fourteen days intervening from the time of inception to the febrile and eruptive manifestations. What the *contagium* is doing during that time it is difficult to conjecture. Possibly it is multiplying itself by subdivision, or by the reproduction of spores. At length the outbreak is startlingly sudden. For instance, a little girl eats breakfast as well as ever, and starts for school in the best of spirits, yet in a few minutes she may complain of feeling sick, vomit, faint, and become so prostrated that she will have to be carried home. A violent fever sets in, and from shock and excessive internal heat the little patient may die within thirty hours. A rural boy who visits a city may bear away to the country the virus of measles, and there contaminate all the impressible in a neighboohood. The poison when taken is not communicable, but in a few days evolves germs that are highly contagious. The virus of variola continues as a *contagium vivum* from one season to another, especially if well protected by *fomites*. The contaminating principle must be very subtle, for it manifests its capacity to spread in various ways. It sticks to clothing, fabrics, and fibrous structures, and impresses an unsuspecting victim in a marvelous manner. And so rapid are its evolutions that the phases of maturity are reached in a few days. During its development the disease seems to produce two poisons, one specific and contagious, and the other general and endozymotic.

The poisons of snakes and hydrophobic dogs are zymotic, yet they develop peculiar phenomena. The bite of the cobra kills so quickly that no secondary symptoms are developed; rattlesnake poison is less virulent, rarely killing through shock or primary impression, but destroying life by developing secondary abscesses, the virus becoming endoseptic. An acquaintance of mine died three months after having been bitten by a moccasin snake. The cause of death was a secondary abscess of the parotid gland. The soft parts about the fang-wound sloughed, and then granulated and healed; but the shock was so profound that the kidneys never regained their normal functions. An anæmic state supervened, pustules appeared here and there in the skin, the salivary glands inflamed, and the left parotid suppurated. Under this complication of disorders, the patient collapsed and died.

Rabies, after the virus has been absorbed, does not appear at once, but may remain latent or inactive for years. Its earliest manifestations are confined chiefly to disorders of the cerebro-spinal axis. The mind becomes anxious, wakeful, startling, fearful, and depressed. After prolonged irritability and exhaustion, clonic spasms attack the muscular system, and on the face are pictured the features of horror and despair. In a severe paroxysm the patient dies of asphyxia, the respiratory functions having been arrested. In such a case the sepsis does not come from putrefactive ferments, but from living germs proliferated from the sepsin of rabies.

In a case of farcy, or equine glanders, a specific virus is introduced into an abrasion of the groomer, and finds there a habitat. The poison profoundly impresses the lymphatic vessels and glands, and develops buboes and secondary abscesses. The poisoning is primarily exoseptic, but becomes endozymotic, often resulting fatally.

If a man dissect a dead animal of considerable size, after putrefaction has set in, which may be soon if the weather be warm, and he puncture the skin of a finger, or poison enter an abrasion, the virus, after passing through its peculiar evolutions, will multiply the septic ferment, and develop dangerous phlebitis and lymphangitis. The zymosis is similar to that obtained in the dissecting room. When animal matter is at a certain stage of decomposition, the ferment is septic and dangerous. At a later stage of decay the poisons escape into the atmosphere and are dissipated, and the dissolving or crumbling "remains" cease to be perilous to touch or handle. And here it may be remarked, that it is not more hazardous to dissect a human body than it is to cut and cleave the tissues of a dead horse.

It is still debatable whether the obstetric finger which has recently touched an erysipelatous patient will convey a septic poison to a new field, and develop metritis and consecutive puerperal peritonitis. In other words, are the several animal poisons specific and distinct, or may the one develop, under favorable circumstances, another kind of disease? A medical friend of mine was treating a case of erysipelas at an eleemosynary institution, and seemingly took diphtheria, from which he died. It being the first diphtheria case in the vicinity, the suspicion arose that in some way the erysipelatous patient had poisoned the doctor. Many obstetrical writers contend that a physician has no right to attend a puerperal patient while he is treating a case of diphtheria, of erysipelas, or of any kind of zymotic disease—the alleged danger being that he will carry to the lying-in room a poison which may excite child-bed fever.

TREATMENT OF ZYMOSIS.

Before mentioning curative methods I will name prophylactic means that may be utilized as preventive of the spread of contagion or sepsis. The surgeon of to-day keeps his finger-nails clean and his instruments immaculate. Traumatic surfaces are either protected from the contact of microzymes, or are kept free of putrescence by the use of what are called antiseptic agencies—germicides. The hands and clothes of the obstetrician must be free from all kinds of contagion. The ordinary practitioner of medicine is thoughtful about carrying from house to house the germs of zymotic fevers, whether they spring from typhus, diphtheria, scarlatina, rubeola, variola, or peritonitis. He is ever scrupulous about transporting the toxic element of any traumatic state to the morbidly impressible. The robust are fortified against invasion, unless the virulence be concentrated and unusually impressive. The medical fraternity may be regarded as a perpetual board of health, in which sanitary measures take their origin and obtain official force. An epidemic of cholera is bulletined from afar, and ways are improvised for shunning or breaking its force. Vaccination is urged as a preventive of small-pox; schools are closed to obviate the spread of scarlatina, diphtheria, and rubeola, and stagnant pools are drained or flooded to prevent the development of miasmatic and zymotic poisons; renovation, fumigation, and purification, are instituted to stay pestilence of all kinds; and at the head of such sanitary work is the physician. His watchful eye and experienced nose detect the approach of a morbid foe. The vigilance of medical men saves the people by warning them to close the gates of entry, though notes of warning be not timely heeded.

The doctor warns his patrons against habits which weaken and undermine physical and moral well-being. He tells his friends how to keep their bodies in a state of defense against the invasion of disease, and explains how morbid influences impress the dyspeptic, the ill-fed, the mentally wretched, and the victims of excesses. He is bold enough to inform the penurious that in his rigid practice of economy he is liable to bring on physical bankruptcy. Disease does not stop to knock at the doors of squalor and discomfort, but stalks in with the assurance of having undisputed rights there.

Medicines which are reputed to exert a prophylactic action upon persons or patients exposed to zymosis, are quinia and sulphurous acid. A man who has undergone amputation of the leg to-day, should have these remedies to-morrow; they will obviate the third day febrility. The woman delivered to-day should take the mentioned medicines to-morrow, if she would avoid *the third day fever.* A patient that has undergone abdominal section should have quinine; *the agent is dynamically antiseptic.*

Of the chemical aseptics little need be said, for current medical literature is burdened with expositions of them. One is the most potent and least noxious to-day, and another to-morrow. Carbolic acid is still potent, yet losing its prestige; and the champions of iodoform claim the field. But whatever be the antiseptic that is in the lead, careful drainage and snug dressings will be needed to insure success. The loose structures of an amputated stump should be held compressed with bandages or other snugly applied wrappings. There should be no room for pockets of accumulating fluids; and a recently emptied womb should be made to contract vigorously, and then kept so by the use of a pad and binder. It is the loosely contracted and hemorrhagic womb which is in danger of septicæmic invasion. Ergot, then, may indirectly prove an antizymotic. It will close the gateway to infection.

Rigor is the earliest symptom of sepsis. The physician regards a chill as a danger signal, and prepares the patient to outride a gathering storm. If the stomach be foul, he will provoke emesis with copious draughts of warm water and specific nauseants. A nasty stomach needs washing as much as a soiled garment—a fact which should be recognized oftener than it is. After having undergone the cleansing process, the organ will digest properly prepared and well received food. It is to be considered that ordinary medicines do not exert their specific actions when thrown into foul and disordered stomachs. Chemical antiseptics, as salicyli acid, thymol, chlorine, and the like, will do little towards sweetening sour ingesta. Bitter, pungent, and aromatic remedies do better. Sulphurous acid is found to be both chemically and dynamically antiseptic, therefore to be liberally used in zymotic states. Baptisia is not chemically antiseptic, but may promote, in toxæmia, constructive metamorphoses. It has been given successfully in diphtheria, scarlatina, and in typhoidal states, yet there is reason to believe the curative activities of the agent have been overrated. Sanative issues depend more on *hygienic* influences than upon medication. It is a common fault for a physician to ascribe miraculous powers to remedies used in successful cases.

The sulphite of soda arrests fermentation in the stomach, and seems to promote asepsis generally. The agent is chemically and physiologically an antiseptic. In the latter stages of zymosis, after secondary abscesses have formed, the remedy manifests no curative powers.

The sulphate of iron in minute doses, exerts an influence to stay the destructive tendencies of zymosis. If the chemical be dissolved in nitric acid, then largely diluted with water, the mixture may be safely and beneficially employed in the earlier stages of blood poisoning. It seems to stay the loss of the red corpuscles of the blood.

Borax—the borate of soda—is a powerful antiseptic in a chemical sense; and mixed with glycerine it forms a liquid that is harmless when taken into the stomach, and it is dynamically an efficient arrester of fermentation. As boroglyceride the compound may be employed as a preservative fluid, and as a medicine to stay the ravages of zymosis in its various manifestations.

It may be remarked in this place that cardiac and arterial sedatives, such as aconite, veratrum, and digitalis, are not to be employed in any of the stages of surgical fever or toxæmia. Neither should such medicines be dispensed in typhoid states of any kind, but may be used in the early stages of scarlatina, rubeola, and variola.

Alcoholic stimulants do some good in depressed paroxysms of zymotic fevers, though their effects are to be watched in order that the agents may be promptly withdrawn as soon as exalted states are perceived. Sparkling champagne is rarely out of place in the management of zymosis, especially when delirium and sleeplessness are present. This agent will carry more typhoidal patients safely through than any other agency. Roman ices, made with West India rum, are quite refreshing to patients vitally exhausted by hectic and purulent discharges.

The substantial food to be given in zymotic states is the extract of beef. This may be prepared at home, and presented hot in the form of tea or soup; or the extract may be purchased, and reduced to palatable forms. Cream embraces a high grade of nutriment, and is commonly well received. Oysters, sweet-breads, and the jellies of calves' feet, when well prepared, are delicious nutrients. There is no place where culinary arts can be practiced to greater advantage than when devoted to the preparation of delicacies for the sick and convalescent. In the treatment of zymotic patients more strength producers come from the kitchen than from the laboratory of the pharmacist.

As soon as a patient, sick with septic fever, has passed through the destructive stages of the disease, and is assimilating nutriment enough to be palpably convalescing, a change of air and scene should be encouraged. In winter a trip to Nassau may be taken with advantage; in summer a prolonged visit at the sea-shore is to be commended. Ocean air and marine food are health promoting. Patients who have passed through severe onsets of diphtheria or typhoid fever should journey at easy stages, and not be exhausted by fatigue. Children reduced by summer complaints generally thrive in the higher regions of mountainous districts.

I will finish the essay by calling attention to the conservative forces which protect the animal organism against sepsis, or blood-poisoning. In a case of compound fracture, for instance, say of the femur, the wound is filled with coagula, and rarely is there an opportunity for them to escape. They decompose, liquefy, and their elements after absorption are cast off through the excretory functions of the body. While on the way out the decomposed yet not discolorized blood passes from one soft tissue to another, perhaps by osmosis, and while on the way can be seen through the skin, as if recently extravasated. All of this clearing-out process may take place without signs of fever or sepsis. This proves that the vigorous body is endowed with protective activities of a pronounced character.

The recently delivered woman has a traumatic uterus, with coagula convenient for entering the uterine sinuses, yet how rarely is she empoisoned. Soldiers receive all kinds of penetrating wounds, and often recover without treatment, the preservative forces of the organism resisting the inception of putrefactive poison. The most virulent agency to resist is an animal miasm developed when human beings are crowded in ships or camps. The subtle poison escapes observation, yet is potent to spread and to kill. Even the robust do not escape the contaminating influence, but take the fever and die as certainly as the feeble. The typhus-virus is more to be dreaded than the sepsis arising from traumatism, for it is more fatal in its tendencies, and less amenable to treatment.

EDITORIALS.

A LETTER.

DES MOINES, IOWA, August 26, 1882.

EDITORS CALIFORNIA MEDICAL JOURNAL: In commenting on the announcement of the Iowa Eclectic Medical College for 1882–83 in the August number of your journal, you speak of the propriety of two graduating terms a year. We omitted to state in our announcement that we would graduate only at the close of the spring term. Such is the case, and we have it distinctly stated in our announcement that no one can graduate by attending two terms in the same year. The two terms required must be in different years.

You are right in regard to dissection. It should be thorough; it cannot be too thorough. We second any motion you may make for a more complete medical education.

Your very modest apology for referring to this matter was not at all necessary. Your national reputation for fair dealing, and our personal acquaintance with a part of your faculty, put you in our estimation above suspicion.

Very truly yours, E. H. CARTER.

The preceding letter from Dr. Carter, of the Iowa Eclectic Medical College, clears up a misunderstanding which we received from the reading of their announcement. We inferred, as we stated in the previous number of this journal, that our Iowa friends were turning out M. D.'s semi-annually. Such not being the case, we correct the statement, and hope that ever in future we can conscientiously speak their praise.

OUR FRIENDS.

WE reckon every liberal physician as our friend. We ask no man to what school he belongs. All we ask is the same right to the exercise of our opinions that we accord to others, and that others demand for themselves. A man who concedes this is a friend. This seems reasonable and just, yet there are many physicians of the dominant school who would apply one rule to us and a different one to themselves. We are told by those whom we have every reason to believe know, that strenuous efforts will be made at the next session of the Legislature to pass a law that shall exclude from practice all but allopathic graduates. It will not be an open law, but under a plausible disguise. It will demand a State Board, which shall be controlled by illiberal allopaths. We do not believe that a bill of this kind can be passed. We are not asleep, but wide awake, taking active interest in what concerns our branch of the profession. We expect to have many friends in the Legislature who will take care of our interests, and defeat any unjust legislation.

We ask our friends throughout the State to take an interest in the coming contest, neglecting no opportunity to secure the confidence and influence of representatives. We must take a decided stand. As citizens and taxpayers we are entitled to the same consideration to appointment to public office as members of the allopathic school. We must lay aside our modesty and demand our rights. If at first we don't succeed, we must try, try again.

BRITISH MEDICAL ASSOCIATION.

THE Fiftieth Annual Meeting of the British Medical Association was held in Worcester, England, the second week of August, 1882. It is said that this Association has a membership of nearly ten thousand medical men, though fifty years ago it had but fifty members. Considerable time was occupied in the discussion of ethical matters. After a long debate upon the homœopathic question, it was at last considered, though the greater number of the members were adverse to the recognition of homœopathy, yet they were not willing to make martyrs of any of the members of that sect who might already be members of the association by expelling them. "In all this," says one of the allopathic journals, "a liberal spirit was manifested."

The address of the president, Dr. Strange, had many true liberal features that would even do credit to an Eclectic Association. He spoke to some length upon the purpose of the Association; how it "prepared the profession to receive new truths, to accept new doctrines, and to overthrow old and long cherished dogmas." He alluded to the *Medical Lancet* as bringing the right lights of the medical profession to the front; how it held up to scorn "pompous ignorance and overbearing imbecility"—a journal that could do a noble work in the United States. "Over the church and over law," continued the orator, "for obvious reasons, it may be desirable that the State should hold a check! But over the investigations of science and over the application to practice of that science, we will have no master other than the moral conscience of our profession itself."

In the address on Medicine, Dr. W. F. Wade dwelt upon injurious effects of blood-letting, and upon many past therapeutical errors.

The address on Surgery was delivered by Dr. Strange, of Dublin. He referred to the rapid advancement of Surgery within the past fifty years; he enumerated in such the abandonment of indiscriminate blood-letting and the reckless use of mercury.

The Association adjourned to convene at Liverpool at their next annual meeting. We might here state that our medical brethren across the pond are possessed of the right spirit; whether their practice is according to their theories or not we are not able to say; yet we would recommend many of our allopathic friends in this country to profit by their example.

ARE YOU IN EARNEST?

WE have about three hundred Eclectic physicians on this coast. We ask each and every one, are you in earnest? Do you believe in the principles you profess? Are you anxious that those principles should prevail? Men usually show their interest by their actions. Were we to judge Eclectic physicians by that standard, we should say that they were not in earnest. Men in earnest stand and contend for their rights. Are you contending for your rights? Are you making any special efforts to disseminate Eclectic theories? Are you in earnest? If you are, please send a student to the next session of the CALIFORNIA MEDICAL COLLEGE. Show your faith by your works. You have it in your power to make that institution the best in the land. There is a young man in every locality who is contemplating the study of medicine. Will you not speak a kind word for the only liberal school of medicine on this coast? By helping the CALIFORNIA MEDICAL COLLEGE you help yourself. The more Eclectics we have, the better will it be for those who are here. In numbers are strength. Be in earnest, and lend your assistance to the good work. The College Building is complete in its appointments. Its faculty are earnest, energetic men, who are fully abreast of the age, and capable instructors. Give this matter your consideration. Be in earnest.

NATIONAL MEDICAL ASSOCIATION.

MEMBERS of the National Eclectic Medical Association, and those contemplating membership the coming year, will please write to the President, Dr. A. J. Howe, Cincinnati, O., informing early in regard to their intentions in respect to work they desire to do, and naming topics they propose to write or speak upon. If parties report promptly a forecast of the meeting at Topeka can be made.

WILL YOU DO IT?

WE need coin. It takes coin to run a medical journal. Will every one who owes us for the CALIFORNIA MEDICAL JOURNAL send us the amount due us? Will *you* do it? Don't tell us to go to thunder, or the hottest place on record. We won't do it. Two dollars is not a large amount, but if our thousand subscribers send us two dollars each, it will make quite a respectable sum. It will make us happy, and you won't feel the amount from your accumulated store. We send this month a gentle reminder to our friends, and hope they will cheerfully respond. We make a personal appeal, and do not mean the other one; we mean you. Be generous, honest, and just, and save your good opinion of yourself. We ask you again, Will you do it?

HYDROPHOBIA.

EXPERIMENTS made in France, in the years 1879 and 1880, go to prove that the injection of the virus of hydrophobia directly into the circulation does not produce rabies. Numerous injections of the virus of rabies into the jugular vein of sheep, have produced hydrophobia in no instance; yet, in every inoculation of the virus into the subcutaneous tissues, death has resulted from hydrophobia. In other instances, virus was first injected into the veins of sheep, afterwards the same sheep were inoculated subcutaneously; in no instance did death result. An endeavor is being made to ascertain if intra venous injection of the virus practiced a day or two after the bite, or an inoculation with virus can preserve an animal from rabies. This will, undoubtedly, be a very interesting experiment, and we shall await its result with interest.

PREJUDICE.

NATURE, in every instance, supplies deficiences. We can see this everywhere; not only in the vegetable, but in the animal kingdom. The organic structures that enter into the composition of a living body, are only present to supply a necessity. As air is present, lungs are the result ; as objects are before us, so is the highly sensitive organ, the eye, produced ; strong muscles result from work ; distance causes a cultivation of speed ; obstacles produce a genius—and so on throughout we can see some part of an organism develop to cope with nature's laws. Again, for example, what speed the deer cultivates as a protection, and what strength other animals whose limbs are heavier and body more cumbersome. The African, in his native land, has a thick skull to protect a more delicate part from the scorching sun. In other climes, a few generations would greatly reduce its thickness. But here I am asked, What have the laws of nature to do with prejudice ? I would reply, We understand how a condition produces speed and strength, and, in a like manner, can we understand how the conditions of life materially effect some change in the form of the mind and in the actions of man.

A man may cultivate certain traits, and yet his surroundings influence his mind. He may have a tendency to expand or contract it, to make it a slave to a dogma, or allow it to act as an exponent of liberalism. Go into the *Regular School* of medicine ; there the young men will picture to you the ignorance of all other schools. They receive but little attention or courtesy at the hands of their tutors, and, to gain the faintest smile or word of praise from them, they imitate their overbearing manners, and relate the same foul stories. The big bear growls, all else is ignorance, behold the light of the world, and the little bears all join the chorus and whine, behold the light of the world. Circumstances in this instance, accompanied by a want of self-respect or independence, gives growth to a prejudice that blights freedom of thought and action through life. They leave their school with diplomas. They do not leave it as free and independent men with the world before them, with the high sense of honor to govern them in their profession.

No, not so. They have taken an oath to be good. Such an oath, with many other imperious absurdities, they carry through life. Great reliance is placed on their collegiate course, for with the true *Regulars* all study dies with their issue from their *Alma Mater.*

Prejudice is not wholly a companion of ignorance. It is frequently entertained in some of the so-called scientific societies and high circles; even entertained by the poet, lawyer, and physician, Oliver Wendell Holmes. It causes no little merriment to see in his addresses delivered before the students of the Medical Department of Harvard, a light flow of prejudice throughout his entire discourse. He gives considerable time to Homœopaths. To Eclectics, this wonderful satirist bestows the credit of spelling whiskey without an *e*, and inflammation with but one *m*, yet he thinks that their practice differs but little from "that of those whom we call regular physicians." We are sure Dr. Holmes would never forget a single letter in *whiskey*, though an Eclectic might. Probably the prejudice of this eminent scholar is but the result of exclusive teaching. If the members of the exclusive school were acted upon only by the liberal rays of eclectism, their minds would not be covered by the thick envelope of prejudice. If they only listened to the voice of science, they would be more generous, more noble. Prejudice and *pompous ignorance* would be a property belonging to those other than that of the medical profession.

A NEW DRUG STORE.

OUR San Francisco friends have been laboring under difficulties in not being able at all times to procure such remedies as are usually prescribed by Eclectic physicians. This may sound strange, but it is true. Some people maintain that there is but little difference between an Eclectic and an Allopath's practice, that they use the same remedies. If an Eclectic sends his prescriptions to the ordinary drug store where Allopaths are daily prescribing, he will find such not to be the case. He will find that not one half of his prescriptions can be filled as written, and that many remedies in daily use by Eclectics are not kept in stock.

This drawback can now be overcome. J. H. Ralston has just opened an elegant Drug Store on the corner of Post and Powell where he keeps a full assortment of Eclectic drugs. His store has been fitted up regardless of expense, in a most attractive and tasty style, and cannot fail to receive a large share of patronage.

His stock is complete in every department, and country physicians can do no better than give Mr. Ralston a call, as he is prepared to furnish what they need at the lowest market rates.

SELECTIONS.

A CASE OF SUDDEN DEATH AFTER CONFINEMENT.

BY U. O. B. WINGATE, M. D., WELLESLEY, MASS.

In the *Medical Record* for July, 1882, Dr. E. P. Hurd, of Newburyport, Massachusetts, reports two cases of sudden death after confinement, one occurring in his own practice the other in the practice of Dr. George W. Snow, of Newburyport, Massachusetts. The following case occurring in my own practice may serve as a companion to the above-named cases.

Early in the morning of July 12, 1880, I was summoned to attend Mrs. F——in confinement. The lady was an American, twenty-six years of age, healthy, and robust, weighing nearly two hundred pounds. She had given birth to four children at full term. Her children were all large at birth, none of them weighing less than eleven pounds. Some two years before this I had attended her in her fourth confinement, and delivered her of a child weighing twelve pounds. A year after, I delivered her of the products of a false conception in the shape of a fleshy mole. On my arrival, I learned that the patient had been in pain, more or less, nearly all night. Vertex presenting; os slightly dilated; parts moist and in good condition. The pains were regular and of good strength. At ten o'clock A. M. a large bag of water had formed, which I then ruptured, and a large amount of water came away with each pain. At eleven o'clock A. M. the patient was getting very tired and asking for help. The head was high up in the L. O. A. position; os well dilated. I found the pulse showing marked signs of exhaustion, and the pains, though regular, were making no progress. Assistance at this hour of the day was not at hand; the day was excessively hot, and the patient refused ether. I at once applied the long forceps and commenced the hardest task I ever undertook in the lying-in room. By the assistance of the husband, who grasped me about the waist from behind, my hands being wound by a towel to the handles of the forceps, I finally succeeded at eleven thirty o'clock in bringing into the world a dead female child which weighed seventeen pounds.

There was but slight laceration of the mother. Stimulants and ergot were administered; the placenta soon came away and the patient rallied well. She seemed very cheerful and grateful that she had been delivered alive, and while I was working over her in arranging dry clothing, she raised a towel and wiped my face, which was dripping with perspiration.

I remained with her an hour and then went home to obtain some refreshments. I had been at home but a short time when a violent ring of my bell brought me to the door where I met the husband, who stated that his wife was dying. I hastened to the bedside, but a short distance, and found her dead. The nurse informed me that she was comfortable up to the time the husband came for me. She then suddenly complained of a sharp pain in the cardiac region, breathed very quickly, turned dark in the face, and at once expired. This occurred about two and a half hours after delivery. No autopsy could be obtained. I could but regard the case as one of cardiac embolism.

I refrain from commenting on the causes of this sad termination of life, as theory is far more rife than fact.—*The Medical Record.*

THE BIRTH OF AN ELEPHANT.

DR. GUSTAVUS E. SUSSDORFF, of New York, contributes to the July number of the *New York Medical Journal and Obstetrical Review* an account of the process of parturition as it took place in the case of the elephant "Queen" last February. The period of gestation was 597 days. There was no noticeable enlargement of the abdomen until it suddenly became quite prominent the day before labor began. This enlargement did not subside with the expulsion of the fœtus and after-birth, but continued four days longer. During the latter month the mammæ became swollen, and soon filled with serous milk. These were the only signs of pregnancy to be seen. The labor began at 3 P. M., February 2d. At this time the mammæ were greatly distended with milk, which came away continuously in drops. The vagina now began to drop down and swell. In a short time thick mucus began to come from the vagina in long ropy strings, and almost poured out just before delivery. From 3 until 8 o'clock "Queen" was evidently uneasy, as she constantly moved her body from side to side, but did not seem to suffer *pain*, and quietly munched some hay up to the very moment of delivery. At 8.10 the young elephant was born, the head presenting, completely enveloped by the unbroken membranes. The head and part of the body rested between the hind legs of the mother, and touched the ground. Without waiting a moment, the mother ruptured the membranes with her two hind feet, when the young one rolled out on its back. The membranes were no sooner liberated than they quickly returned into the vagina. The umbilical cord had not been seen at all, having probably been torn away during the descent of the fœtus. The mother now quickly turned to the young, and on seeing it began to roar and bellow furiously, which she continued for ten minutes. As soon as she saw the baby she also at once placed one fore-foot on it and rolled it several times, as one does a lemon under the palm of his hand, the bellowing and roaring continuing. In a moment or two more she placed her abdomen upon a short post in the ground, to which she was chained, standing almost upon her head, and grasping the post with her trunk, thus forcing the abdomen with great power against the post. "Queen" remained in that position for about ten minutes, then became quiet, and, while playing with her young, took some food. Nothing indicative of after-pains could be recognized after this, and in one hour and thirty minutes the placenta was expelled. With it there came about two quarts of clotted blood. There was no hemorrhage either from the uterus or from the umbilicus of the calf. The duration of labor was five hours and ten minutes. The calf, a female, weighed 245 pounds, and stood just three feet high. It began nursing one hour and forty minutes after birth. It had two middle upper teeth. The umbilical cord entered the abdomen about three inches anterior to the vagina, and had been detached very close to the abdomen, as none was visible at that point, the canal being open and large enough to admit a good sized finger for half an inch. Dr. Sussdorff remarks that there are several very interesting and instructive points in this history. First, the period of gestation is evidently not affected by change of climate and captivity, lasting about nineteen and a half months. The time of labor is short, and evidently there is not much pain. The sagacity of the animal is remarkable, as shown by the manner in which she ruptured the membranes, the means she took to excite respiration by rolling the young, and, finally, her effort to express the placenta from the uterus. He then describes the placenta and the fœtal membranes, comparing them with those described by Owen, and adds a summary of various observations that have been made of the milk of the elephant as compared with that of other animals, giving drawings which show its microscopical characters in comparison with those of cow's milk.

MEDICAL SOCIETIES.

PROCEEDINGS OF THE NEBRASKA STATE ECLECTIC MEDICAL ASSOCIATION.

THE Nebraska State Eclectic Medical Association met pursuant to adjournment, President R. S. Grimes, M. D., in the chair. Roll of officers called; absent, Treasurer Vancamp, of Omaha, and E. L. Siggins, Corresponding Secretary.

Minutes of last meeting read and approved.

The President then delivered his annual address. He referred to the status of Eclecticism in the west—the present condition of our Association; urged members to stand by our principles, which are founded on everlasting truth, and referred to the illiberality of allopathy, and the discrimination of some of our public functionaries in the distribution of public favors. However unpopular our cause may have been, despite the suppression of our name, our doctrines and our achievements by the wretched tools of a barbarous practice employed by the national commissioners of education, Eclectic medicine has a place in American history. Taking it all together, the address was one of the best ever delivered before the Association.

Reports of committees being in order, the Commitee on Medical Legislation reported progress and was continued.

The Committee on Medical Colleges reported; the report was adopted and the committee continued.

Dr. Latta read an essay showing the effects which may be produced upon the fœtus in utero by frightening the mother, which led to an animated discussion, several members participating.

Recess was then taken until 8 P. M., at which time the meeting was called to order, and an essay was read by Dr. Woodward, subject, "Cerebro Spinal Meningitis," which was followed by Dr. Van DeWalker, on the same subject, which brought out a general discussion.

An interesting essay was read by Dr. Sturdevant—subject, "A Rational Practice of Medicine"—which was well received.

The hour being late, the Association adjourned until 8 A. M., of the 9th, at which time the Association was called to order by the President, and election of officers declared in order. The following officers were elected for the ensuing year:—

Dr. R. B. Morton, President; Dr. A. L. Root, Vice-President; Dr. C. L. Sturdevant, Secretary; Dr. R. S. Grimes, Corresponding Secretary; Dr. J. S. McCasland, Treasurer; Drs. Babcock, Van DeWalker, and Woodward, Board of Censors.

A committee of two was appointed to escort the officers to their respective chairs. After a few appropriate remarks from the retiring officers and those newly installed, the Association elected delegates to attend the National Association, consisting of Drs. Latta, Grimes, Woodward, Morton, Root, McCasland, and Babcock.

Reports of cases in practice, and general discussion for the good of the Association, followed at some length.

A vote of thanks was tendered to the retiring officers, to the different railroads for reduction of fares, also to Mr. McIntire of the Arlington Hotel.

A resolution was adopted to have the proceedings of this Convention published in the *State Journal*, and also in the various Eclectic medical journals. There being no further business before the Association, it adjourned to meet at Seward on the last Tuesday in May, A. D. 1883.

C. L. STURDEVANT, Secretary.

TEXAS ECLECTICS.

A NUMBER of Eclectic physicians met in the city of Lampasas, Texas, July 4, 1882, and adopted preliminary measures for an organization of all Eclectic and liberal physicians of Texas, and the following proceedings were had: J. W.

Allen. M. D., of Stephenville, was elected President; J. N. Atkinson, M: D, of Lampasas, Texas, was elected Vice-President; J. W. Hooten, M. D., of Senterfitt, Texas, was elected Secretary.

A committee was appointed to draft a constitution, by-laws and code of ethics, to be read and adopted at the next meeting.

Several physicians were appointed to prepare and read at the next regular meeting essays or theses, and several physicians joined the association by title. The meeting was quite a success, especially as it was the first Eclectic Association ever held in the State.

It was decided by vote that the next meeting should be held on the 23d day of October, 1882, in the city of Stephenville, Erath County, Texas, and at said meeting a large attendance will be expected. A corresponding committee was also appointed, to notify all Eclectic and liberal physicians of the State to be in attendance on said meeting.

J. W. ALLEN, M. D., President.
J. W. HOOTEN, M. D., Secretary.

LAMPASAS, Texas, July 4.

OAKLAND, CAL., August 12, 1882.

THE regular meeting of the Alameda County Eclectic Medical Society was held in the College Hall, August 12th, at 7:30 P. M., Dr. A. W. Bixby presiding.

On roll call, the following officers answered to their names: Dr. A. W. Bixby, President; Dr. Crowley, Vice President; Dr. Warren, Treasurer; Dr. Webb, Secretary. Minutes of previous meeting were read and approved. There being no further business before the meeting, essays were read by Drs. Bixby, Cornwall, and Webb, all of which were criticised to some length by the different members of the Society.

At a late hour the Society adjourned to meet in College Hall, the second Tuesday of October.

J. P. WEBB, Secretary.

BOOK REVIEWS.

THE INCIDENTAL EFFECT OF DRUGS, by Dr. L. Lewin, Assistant at the Pharmacological Institute of the University of Berlin. Translated by W. T. Alexander, M. D. New York: Wm. Wood & Co., 1882. San Francisco: A. L. Bancroft.

This work as well as speaking of the usual therapeutical action of drugs, enters quite extensively into the incidental effects. Its contents are classified. Commencing with tonics, it continues with astringents, acids, alteratives, and so on throughout the entire work. The author in his introduction says: "Drugs act locally in the animal economy, *i. e.*, they influence exclusively, or in a particular manner, according to their chemical or physical properties, certain classes of cells or celluler structures." In his description of an opiate, speaking of its hypnotic effect, he also alludes to its paralytic effects on the nerves which influence the movements of the intestines, in this way causing stagnation of the intestinal contents. He thinks the tartar emetic as well as causing an unusual activity of the gastric mucous membrane, lessens the heart's action by the direct action of the drug upon the substance of the heart. It is said that chloroform frequently will not produce anæsthesia, the writer giving as a reason of this anomalous result, that the structures which are usually affected by the action of this drug, are different from that of the same parts in other persons. No other work enters so extensively into this subject. By its careful perusal, the considerable mystery which has followed therapeutics is greatly done away with, and scientific reasons are given in its place.

A CLINICAL HAND-BOOK ON THE DISEASES OF WOMEN. By W. Symington Brown, M. D., Member of the Genecological Society of Boston, etc. New York: Wm. Wood & Co., 1882. San Francisco: A. L. Bancroft & Co.

This work of about 250 pages of clearly written matter, is one that considers briefly and very clearly its different subjects. If a practitioner of medicine only desires a superficial idea of this subject, this is an excellent work. For a student in college, it is a practical guide and will materially aid him in preparing for his final examination. The author does not claim the work as a treatise, but only a compilation taken from the old masters, and the best writers of the present generation. It will undoubtedly be in great demand by medical students, and country practitioners who can give but a limited part of their time to any specialty.

AN INDEX OF SURGERY; being a Concise Classification of the Main Facts and Theories of Surgery, for the use of Senior Students and others. By C. B. Keitly, F. F. C. S., Senior Assistant Surgeon to the West London Hospital; Surgeon to the Surgical Aid Society. New York: W. M. Wood & Co. San Francisco: A. L. Bancroft & Co.

This work is a well-written compendium of 316 pages. The author in his preface says: "This book is intended to be read by the Senior student shortly before he goes in for final examination, and after he has carefully studied a complete text book of surgery." His intentions are not that it will be received by the entire profession; but, in fact, it is a work well worth the reading. Before entering minutely into the details of any subject it is well to have a general classification of the same, or a few good ideas upon the usual theories and facts of any specialty. With such information as a basis, it is easy to elaborate. Upon anchylosis and antiseptic treatment one page is given; dislocations nine; fractures twelve. Other diseases and injuries are given such space in the same ratio as the subject demands.

BOOK NOTICES.

THE INCIDENTAL EFFECTS OF DRUGS, by Dr. L. Lewin, Assistant at the Pharmacological Institute of the University of Berlin. Translated by W. T. Alexander, M. D. New York: Wm. Wood & Co., 1882. San Francisco: A. L. Bancroft.